LISTING OF THE CLAIMS

The following list, if entered, replaces all prior versions of the claims.

1-13. (Canceled)

14. (Previously Presented) A method comprising:
identifying a first network component in a first path using a first identifier stored in a data structure, wherein
the first path is between a first node and a second node;
removing the first identifier from the data structure; and
identifying a second network component in a second path using a second identifier stored in the data structure, wherein
the second identifier remains in the data structure subsequent to the removing the first identifier,
the second path is between the first node and the second node, and
the first path and the second path are disjoint.

15. (Previously Presented) The method of claim 14, further comprising:
identifying a plurality of network components in the first path using identifiers stored in the data structure; and
removing the identifiers corresponding to the network components in the first path from the data structure.

16. (Previously Presented) The method of claim 15, further comprising:
storing the plurality of identifiers in the data structure, wherein
each one of the identifiers represents a corresponding one of a plurality of network components.

17. (Previously Presented) The method of claim 14, further comprising:
sending a packet from the first node via the first path; and
sending a duplicate of the packet from the first node via the second path.

18. (Previously Presented) The method of claim 17, wherein the first and second network components are nodes.

19. (Previously Presented) The method of claim 17, wherein the first and second network components are links.

20. (Previously Presented) The method of claim 17, further comprising:
removing the second identifier from the data structure;
identifying a third network component, in a third path between the first node and the second node, using a third identifier stored in the data structure, wherein
the third identifier remains in the data structure subsequent to the removing the second identifier, and
the first path, the second path, and the third path are disjoint.

21. (Previously Presented) The method of claim 20, further comprising:
sending an additional duplicate of the packet from the first node via the third path.

22. (Previously Presented) The method of claim 17, further comprising:
associating a sequence number with each of the packet and the duplicate of the packet.

23. (Previously Presented) The method of claim 22, further comprising:
receiving both of the packet and the duplicate of the packet at the second node; and
discarding one of the packet and the duplicate in response to the sequence number associated with each of the packet and the duplicate.

24. (Previously Presented) The method of claim 17, wherein the identifying ones of the network elements in the first path is based on an Open Shortest Path First (OSPF) algorithm.

25. (Previously Presented) The method of claim 17, wherein
the packet is a Voice over Internet Protocol (VoIP) packet.

26. (Previously Presented) The method of claim 17, wherein the sending the packet comprises sending the packet according to a label-switching protocol.

27. (Previously Presented) The method of claim 17, further comprising:
storing cost and topology information, wherein
the cost and topology information is used to identify the first path.

28. (Previously Presented) The method of claim 17, wherein
the data structure is a heap data structure.

29. (Previously Presented) A method comprising:
sending a packet from a first network element to a second network element via a first path using multiprotocol label switching protocol (MPLS); and
sending a duplicate of the packet from the first network element to the second network element via the second path using MPLS, wherein
the first path and the second path are disjoint.

30. (Previously Presented) The method of claim 29, wherein the identifying the first path is based on an Open Shortest Path First (OSPF) algorithm.

31. (Previously Presented) The method of claim 30, wherein the identifying the second path is based on the OSPF algorithm.

32. (Previously Presented) The method of claim 30, further comprising:
associating a sequence number with each of the packet and the duplicate of the packet.

33. (Previously Presented) The method of claim 32, further comprising:
receiving both of the packet and the duplicate of the packet at the second node; and
discarding one of the packet and the duplicate in response to the sequence number associated with each of the packet and the duplicate.

34. (Previously Presented) The method of claim 30, wherein

the packet is a Voice over Internet Protocol (VoIP) packet.

35. (Previously Presented) The method of claim 29, further comprising:

identifying a first network component in the first path using a first identifier stored in a data structure;

removing the first identifier from the data structure;

identifying a second network component in the second path using a second identifier stored in the data structure, wherein

the second identifier remains in the data structure subsequent to the removing the first identifier.

36. (Previously Presented) The method of claim 35, wherein the first and second network components are nodes.

37. (Previously Presented) The method of claim 35, wherein the first and second network components are links.

38. (Previously Presented) A computer readable medium comprising program instructions executable to:

identify a first network component, in a first path between a first node and a second node, using an identifier stored in a data structure;

remove the identifier corresponding to the first network component from the data structure; and

identify a second network component, in a second path between the first node and the second node, using a second identifier stored in the data structure, wherein

the second identifier remains in the data structure subsequent to removal of the first identifier, and

the first path and the second path are disjoint.

39. (Previously Presented) The computer readable medium of claim 38, wherein the program instructions are further executable to:
identify a plurality of network components in the first path using identifiers stored in the data structure; and
remove the identifiers corresponding to the network components in the first path from the data structure.

40. (Previously Presented) The computer readable medium of claim 39, wherein the program instructions are further executable to:
store identifiers in the data structure, wherein
each one of the identifiers represents a corresponding one of a plurality of network components.

41. (Previously Presented) The computer readable medium of claim 38, wherein the program instructions are further executable to:
send a packet from the first node via the first path; and
send a duplicate of the packet from the first node via the second path.

42. (Previously Presented) The computer readable medium of claim 41, wherein the first and second network components are nodes.

43. (Previously Presented) The computer readable medium of claim 41, wherein the first and second network components are links.

44. (Previously Presented) The computer readable medium of claim 41, wherein the program instructions are further executable to:
associate a sequence number with each of the packet and the duplicate of the packet.

45. (Previously Presented) The computer readable medium of claim 41, wherein ones of the network elements in the first path are identified based on an Open Shortest Path First (OSPF) algorithm.

46. (Previously Presented) The computer readable medium of claim 45, wherein the packet is a Voice over Internet Protocol (VoIP) packet.

47. (Previously Presented) The computer readable medium of claim 41, wherein the packet is sent according to a label-switching protocol.

48. (Previously Presented) The computer readable medium of claim 41, wherein the program instructions are further executable to:
store cost and topology information, wherein
the cost and topology information is used to identify the first path.

49. (Previously Presented) A computer readable medium comprising program instructions executable to:
send a packet from a first network element to a second network element via a first path using multiprotocol label switching protocol (MPLS); and
send a duplicate of the packet from the first network element to the second network element via the second path using MPLS, wherein
the first path and the second path are disjoint.

50. (Previously Presented) The computer readable medium of claim 49, wherein the first path is identified based on an Open Shortest Path First (OSPF) algorithm.

51. (Previously Presented) The computer readable medium of claim 50, wherein the second path is identified based on the OSPF algorithm.

52. (Previously Presented) The computer readable medium of claim 50, wherein the program instructions are further executable to:
associate a sequence number with each of the packet and the duplicate of the packet.

53. (Previously Presented) The computer readable medium of claim 50, wherein the packet is a Voice over Internet Protocol (VoIP) packet.

54. (Previously Presented) The computer readable medium of claim 49, wherein the program instructions are further executable to:

identify a first network component in the first path using a first identifier stored in a data structure;

remove the first identifier from the data structure; and

identify a second network component in the second path using a second identifier stored in the data structure, wherein

the second identifier remains in the data structure subsequent to removal of the first identifier.

55. (Previously Presented) A system comprising:

means for identifying a first network component in a first path using an identifier stored in a data structure, wherein

the first path is between a first node and a second node;

means for removing the identifier corresponding to the first network component from the data structure; and

means for identifying a second network component in a second path using a second identifier stored in the data structure, wherein

the second identifier remains in the data structure subsequent to removal of the first identifier

the second path is between the first node and the second node, and

the first path and the second path are disjoint.

56. (Previously Presented) The system of claim 55, further comprising:

means for identifying a plurality of network components in the first path using identifiers stored in the data structure; and

means for removing the identifiers corresponding to the network components in the first path from the data structure.

57. (Previously Presented) The system of claim 56, further comprising:
means for identifying a plurality of network components in the first path using identifiers stored in the data structure; and
means for removing the identifiers corresponding to the network components in the first path from the data structure.

58. (Previously Presented) The system of claim 55, further comprising:
means for storing identifiers in the data structure, wherein
each one of the identifiers represents a corresponding one of a plurality of network components.

59. (Previously Presented) The system of claim 55, further comprising:
means for sending a packet from the first node via the first path; and
means for sending a duplicate of the packet from the first node via the second path.

60. (Previously Presented) The system of claim 59, wherein the first and second network components are nodes.

61. (Previously Presented) The system of claim 59, wherein the first and second network components are links.

62. (Previously Presented) The system of claim 59, further comprising:
means for associating a sequence number with each of the packet and the duplicate of the packet.

63. (Previously Presented) The system of claim 59, wherein ones of the network elements in the first path are identified based on an Open Shortest Path First (OSPF) algorithm.

64. (Previously Presented) The system of claim 59, wherein
the packet is a Voice over Internet Protocol (VoIP) packet.

65. (Previously Presented) The system of claim 59, wherein the packet is sent according to a label-switching protocol.

66. (Previously Presented) The system of claim 59, further comprising:
means for storing cost and topology information, wherein
the cost and topology information is used to identify the first path.

67. (Previously Presented) A system comprising:
means for sending a packet from a first network element to a second network element via a first path using multiprotocol label switching protocol (MPLS); and
means for sending a duplicate of the packet from the first network element to the second network element via the second path using MPLS, wherein
the first path and the second path are disjoint.

68. (Previously Presented) The system of claim 67, wherein the first path is identified based on an Open Shortest Path First (OSPF) algorithm.

69. (Previously Presented) The system of claim 68, further comprising:
means for associating a sequence number with each of the packet and the duplicate of the packet.

70. (Previously Presented) The system of claim 68, wherein
the packet is a Voice over Internet Protocol (VoIP) packet.

71. (Previously Presented) The system of claim 67, further comprising:
means for identifying a first network component in the first path using a first identifier stored in a data structure;
means for removing the first identifier from the data structure;
means for identifying a second network component in the second path using a second identifier stored in the data structure, wherein
the second identifier remains in the data structure subsequent to the removal of the first identifier.

72. (Previously Presented) The system of claim 71, wherein the first and second network components are nodes.

73. (Previously Presented) The system of claim 71, wherein the first and second network components are links.

74. (Previously Presented) A system comprising:
a first node;
a second node;
a first path between the first node and the second node; and
a second path between the first node and the second node, wherein
the first node is configured to:
identify a first network components in the first path using a first identifier stored in a data structure,
remove the first identifier from the data structure, and
identify a second network component in the second path using a second identifier stored in the data structure,
the second identifier remains in the data structure subsequent to removal of the first identifier, and
the first path and the second path are disjoint.

75. (Previously Presented) The system of claim 74, wherein the first node is configured to:
identify a plurality of network components in the first path using identifiers stored in the data structure; and
remove the identifiers corresponding to the network components in the first path from the data structure.

76. (Previously Presented) The system of claim 75, wherein the first node is configured to:
store identifiers in the data structure, each one of the identifiers representing a corresponding one of a plurality of network components.

77. (Previously Presented) The system of claim 74, wherein the first node is configured to:
send a packet via the first path, and
send a duplicate of the packet via the second path.

78. (Previously Presented) The system of claim 77, wherein the first and second network components are nodes.

79. (Previously Presented) The system of claim 77, wherein the first and second network components are links.

80. (Previously Presented) The system of claim 77, wherein the first node is further configured to:
associate a sequence number with each of the packet and the duplicate of the packet.

81. (Previously Presented) The system of claim 77, wherein the first node identifies the ones of the network elements in the first path based on an Open Shortest Path First (OSPF) algorithm.

82. (Previously Presented) The system of claim 81, wherein
the packet is a Voice over Internet Protocol (VoIP) packet.

83. (Previously Presented) The system of claim 77, wherein the first node is sends the packet according to a label-switching protocol.

84. (Previously Presented) A system comprising:
a first node;
a second node;
a first path between the first node and the second node; and
a second path between the first node and the second node, wherein
the first node is configured to:

send a packet to the second node via the first path using multiprotocol label switching protocol (MPLS); and

send a duplicate of the packet to the second node via the second path using MPLS, and

the first path and the second path are disjoint.

85. (Previously Presented) The system of claim 84, wherein the first node is configured to identify the first path based on an Open Shortest Path First (OSPF) algorithm.

86. (Previously Presented) The system of claim 85, wherein the first node is configured to identify the second path based on the OSPF algorithm.

87. (Previously Presented) The system of claim 85, wherein the first node is configured to associate a sequence number with each of the packet and the duplicate of the packet.

88. (Previously Presented) The system of claim 87, wherein the second node is configured to discard one of the packet and the duplicate in response to the sequence number associated with each of the packet and the duplicate.

89. (Previously Presented) The system of claim 85, wherein the packet is a Voice over Internet Protocol (VoIP) packet.

90. (Previously Presented) The system of claim 84, wherein the first node is configured to:

identify a first network component in the first path using a first identifier stored in a data structure;

remove the first identifier from the data structure; and

identify a second network component in the second path using a second identifier stored in the data structure, wherein

the second identifier remains in the data structure subsequent to removal of the first identifier.